

Observations of Occultations of Stars by the Moon and of Phenomena of Jupiter's Satellites, made at the Royal Observatory, Greenwich, in the year 1889.

(Communicated by the Astronomer Royal.)

Occultations of Stars by the Moon.

Day.	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation. h m s	Observer.
1889, Feb. 9	Disapp. ϵ Tauri	Altaz.	100	Dark	6 46 18.15	A. D.
12	" 63 Geminorum	Altaz.	100	"	7 40 47.33	H. T.
12	" 63 Geminorum	E. Equat.	140	"	7 40 47.49	H.
Sept. 16 (a)	" ζ Tauri	Lassell Refl.	280	Bright	12 53 41.49	H. T.
16 (b)	" ζ Tauri	Altaz.	100	"	12 53 41.15	L.
16	Reapp. ζ Tauri	Lassell Refl.	280	Dark	13 36 55.29	H. T.
16	" ζ Tauri	Altaz.	100	"	13 36 55.96	L.
Oct. 5	Disapp. 56 Aquarii	Altaz.	100	"	8 39 47.40	T.
29	" Piazzixix. 22	Altaz.	100	"	6 30 57.95	W. R.
Dec. 31	" 85 Ceti	E. Equat.	200	"	5 4 58.36	O.
31	" 85 Ceti	Altaz.	100	"	5 4 57.86	H.

Notes.

(a) No projection. Disappeared instantaneously at bright limb.

(b) Star touched the Moon's limb 5 seconds before time of observation, was wholly inside the limb at 12^h 53^m 40^s; it appeared as a brilliant spot on the Moon, and disappeared suddenly at time given above.

For the occultation of *Jupiter* on August 7 and of Satellites II. and IV., see vol. I. p. 36.

Phenomena of Jupiter's Satellites.

Day.	Satellite.	Phenomenon.	Telescope.	Power.	Mean Solar Time of Observation.	Mean Solar Time of N.A.	Observer.
1889 Apr. 22 (a)	III.	Ecl. D. Last seen	E. Equat.	140	h m s 14 5 25	h m s 14 4 35	J. P.
	I.	Occ. R. Last contact	Lassell Refl.	280	13 22 0	13 20 0	H. T.
	I.	Tr. Egr. First contact	Altaz.	100	12 11 34	12 13 0	A. D.
	I.	Last contact	"	"	12 14 53		"
31 (d)	II.	Occ. R. First seen	Lassell Refl.	280	13 56 7	13 56 0	H.
	II.	Full brightness	"	"	14 4 47		"
June 4	I.	Ecl. D. Began to fade	"	"	14 5 40	14 7 23	"
	I.	Last seen	"	"	14 7 50		"
July 6	I.	Occ. D. First contact	Corbett Refr.	110	10 16 8		A. D.
	I.	Bisection	"	"	10 19 22		"
	I.	Last seen	"	"	10 22 28		"
	I.	First contact	Lassell Refl.	280	10 17 45	10 22 0	L.
	I.	Bisection	"	"	10 19 55		"
	I.	Last seen	"	"	10 22 30		"
15	I.	Ecl. R. First seen	Altaz.	100	9 18 6	9 17 28	T.